

## ABSTRACT

### Behavioral Digital Simulation Using Hybrid Control and Data Flow Representations

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The present invention provides a method and mechanism for simulating complex digital circuits using hybrid control and data flow representations. Specifically, the invention provides a method of controlling the simulation of a digital circuit in such a way that desired functions are annotated for subsequent analysis. A hardware design code describing the digital circuit is converted to an assignment decision diagram (ADD) representation that is then annotated with one or more control nodes that are used for maintaining control flow through a simulator. In this way, one or more break points are created that allow the simulator to stop at associated points in the simulation.

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